

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,052	04/05/2001	Michio Miyano	450104-02507	2424
20999	7590	08/24/2004	EXAMINER	
FROMMER LAWRENCE & HAUG			TON, ANTHONY T	
745 FIFTH AVENUE- 10TH FL.				
NEW YORK, NY 10151			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/744,052	MIYANO ET AL.	
	<b>Examiner</b> Anthony T Ton	<b>Art Unit</b> 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 April 2001.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/18/2000</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - a) Term “**channel right**” in line 2, line 3, and line 6 in page 2 is improper.  
Examiner suggests changing this term to “**right channel**”.
  - b) Term “AV device 71” in line 11 (two places) and lines 14-15 in page 30 is not associated with that labeled in Fig.12.  
Examiner suggests changing this term to “AV device **91**”.
  - c) Term “second IRD **70**” in line 19 and line 22 in page 32 is not associated with that labeled in Fig.14.  
Examiner suggests changing this term to “second IRD **700**”.

Appropriate correction is required.

### *Drawings*

2. **Figure 6** should be designated by a legend such as --**Prior Art**-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. **Claims 6 and 15** are objected to because of the following informalities:

a) **In Claim 6:** Term “channel:” in line 3 is improper since the colon “:” should be replaced by a semicolon “;”.

Examiner suggests changing this term to “channel;”

b) **In Claim 15:** Term “according to claim 11” in line 1 is improper since it is not associated with claimed limitations “**the work**” in **line 3** and “**said table**” in **line 5**.

Examiner suggests changing this term to “according to claim 14” to provide sufficient antecedent bases as recited in the **claim 14** for such claimed limitations.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) **Claim 1** recites the limitation “**said specific device**” in **lines 8-9**. There is insufficient antecedent basis for this limitation in the claim.

b) **Claim 1** recites the limitation “**other device**” in **line 9**. Is this limitation the same as the limitation “**other device**” in **line 7**? There is insufficient antecedent basis for this limitation in the claim.

c) **Claim 1** recites the limitation “**other device**” in **line 7** and **line 9**. Is this limitation the same as the limitation “**another device**” in **line 5**? There is insufficient antecedent basis for this limitation in the claim.

d) **Claim 3** recites the limitation “**said other devices**” in **line 4**, and in **lines 7-8**. There is insufficient antecedent basis for this limitation in the claim.

e) **Claim 6** recites the limitation “**said device**” in **line 4**. Is this limitation the same as the limitation “**other device**” in **line 2**? There is insufficient antecedent basis for this limitation in the claim.

f) **Claim 11** recites the limitation “**other device**” in **lines 7-8**. Is this limitation the same as the limitation “**other device**” in **line 6**? There is insufficient antecedent basis for this limitation in the claim.

g) **Claim 12** recites the limitations “**the first isochronous channel**” in **lines 4 -5**, and “**the second device**” in **line 6**. There are insufficient antecedent bases for these limitations in the claim.

h) **Claim 15** recites limitations “**the work**” in **line 3** and “**said table**” in **line 5**. There are insufficient antecedent bases for these limitations in the claim.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Akatsu et al.** (US Patent No. 6,633,547) hereinafter referred to as **Akatsu**.

a) In **Regarding to Claim 1:** **Akatsu disclosed** a communication method for effecting a communication among devices connected to a predetermined network (*see Fig.5*), comprising the among devices steps of:

established a first connection between a first device connected to said network and another device (*see Fig.5: 502 connected from 504 to 524*);

establishing a second connection between said first device and other device (*see the connection between the 504 and 540 or 548 in Fig.5*); and

an isochronous communication is effected between said establishing said first device and the other device by using the two connections of said first connection and said second connection (*see col.6 lines 6-22*) .

b) In **Regarding to Claim 2:** **Akatsu further disclosed** the communication method according to claim 1, wherein

said first connection is a connection established between a virtual output plug of said first device and a virtual input plug of a second device comprising said other device by using a first isochronous channel (*see Fig.6: 612 connected from 504 to 524; and Fig.13: the third column in section 1624 (isochronous channels)*),

said second connection is a connection established between a virtual output plug of said second device and a virtual input plug of said first device by using a second isochronous channel (*see Fig.6: 612 connected from 524 to 504; and Fig.13: the third column in section 1624 (isochronous channels)*), and

a bidirectional communication is effected by using said first and second isochronous channels with said first and second connections established thereon (*see Fig.6: the bidirectional link 612; and col.5 line 58 – col.6 line 22*).

c) In **Regarding to Claim 3:** Akatsu further disclosed the communication method according to claim 1, wherein

said first connection is a connection established between a virtual output plug of said first device and a virtual input plug of a second device which is one of said other devices by using a first isochronous channel (*see Fig.5: the IEEE 1394 connection 502 from 524 (first device) to 528 (second device)*),

said second connection is a connection established between a virtual output plug of a third device which is one of said other devices and a virtual input plug of said first device by using a second isochronous channel (*see Fig.5: the IEEE 1394 connection 502 from 524 (first device) to 504 (3rd device)*), and

a communication from said first device to said second device is effected by using a first isochronous channel with said first connection established thereon and a communication from said third device to said first device is effected by using a second isochronous channel with said second connection established thereon (*see col.5 line 58 – col.7 line 2*).

d) In **Regarding to Claim 4:** Akatsu further disclosed the communication method according to claim 1 wherein

when the network is reset in a state in which said connection is established, in order to re-establish the connection, which was canceled by the reset of the network, a work for re-establishing a connection is executed with reference to a table of

identification IDs on the network and identification IDs unique to respective devices (*see col.8 lines 45-52 and col.11 lines 4-15*).

**e) In Regarding to Claim 5:** Akatsu further disclosed the communication method according to claim 4, wherein

if it is determined with reference to said table that the device in which the connection was set is not connected to the network, the work for re-establishing the connection is stopped (*see col.2 lines 57-65, and Fig.21: step 2824 with “NO” condition*).

**f) In Regarding to Claims 6-10:** the claimed subject matters of these claims are the same as that of claims 1-5, respectively. Therefore, the rejections to claims 1-5 would also apply to these claims in a communication apparatus as taught.

**g) In Regarding to Claims 11-15:** the claimed subject matters of these claims have been taught by claims 1-5. Therefore, the rejections to claims 1-5 would also apply to these claims in a communication control apparatus as taught.

**h) In Regarding to Claim 16:** Akatsu disclosed a communication system for effecting a communication between a first device and a second device connected to a predetermined network, wherein

said first device includes a virtual output plug for isochronous communication and a virtual input plug for isochronous communication (*see Fig.6: the bidirectional 612 link connected from 504 to 524; and see col.5 line 58 – col.6 line 22*),

said second device includes a virtual output plug for isochronous communication and a virtual input plug for isochronous communication (*see Fig.6: the bidirectional 612 link connected from 524 to 504; and see col.5 line 58 – col.6 line 22*),

a first connection is established between the virtual output plug of said first device and the virtual input plug of said second device by using a first isochronous channel (*see Fig.2: a connection from a bridge 204 to one port of the first I/O 104*),

a second connection is established between the virtual output plug of said second device and the virtual input plug of said first device by using a second isochronous channel and a bidirectional isochronous communication is effected between said first device and said second device by using said first connection and said second connection (*see Fig.2: a connection from another bridge 204 to another port of the first I/O 104; and see col.4 line 66 – col.5 line 36*).

i) In **Regarding to Claim 17:** Akatsu disclosed a communication system for effecting a communication among a first device, a second device and a third device connected to a predetermined network (*see Fig.3*), wherein said first device includes a virtual output plug for isochronous communication and a virtual input plug for isochronous communication (*see Fig.3: the third 104 counted from top to bottom as a reference*),

said second device includes isochronous communication (*see Fig.3: the second 104 counted from top to bottom as a reference*) and

said third device includes a virtual output plug for isochronous communication (*see Fig.3: the first 104 counted from top to bottom as a reference*),

a first connection is established between the virtual output plug of said first device and the virtual input plug of said second a virtual input plug for device by using a first isochronous channel (*see Fig.3: the connection 304 connected from the third 104 to the second 104*),

a second connection is established between the virtual output plug of said third device and the virtual input plug of said first device by using a second isochronous channel (*see Fig.3: the connection 304 connected from the third 104 to the first 104*), and a communication from said first device to said second device is effected by using said first connection and a communication from said third device to said first device is effected by using said second connection (*see col.4 line 66 – col.6 line 22*).

j) **In Regarding to Claim 18:** Akatsu disclosed a supply medium which stores therein a program for controlling a communication effected among devices connected to a predetermined network, wherein

said supply medium stores therein a program in which a first connection is established between a first device and another device connected to said network, a second connection is established between said first device and other device and processing for effecting an isochronous communication between said first device and other device by using said first connection and said second connection is executed (*see col.19 lines 11-29*).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1, 6, 11, 16 and 17** are rejected under 35 U.S.C. 102(e) as being anticipated by **Ghodrat et al.** (US Patent No. 6,717,947) hereinafter referred to as **Ghodrat**.

a) **In Regarding to Claim 1:** **Ghodrat disclosed** a communication method for effecting a communication among devices connected to a predetermined network (*see Fig.2*), comprising the among devices steps of:

established a first connection between a first device connected to said network and another device (*see Fig.2: IEEE1394 bus connected from 25 to node 1*);

establishing a second connection between said first device and other device (*see the connection between the 25 and 115 or 120 in Fig.2*); and

an isochronous communication is effected between said establishing said first device and the other device by using the two connections of said first connection and said second connection (*see col.7 lines 26-35*).

b) **In Regarding to Claim 6:** the claimed subject matters of this claim are the same as that of claim 1. Therefore, the rejection to claim 1 would also apply to this claim in a communication apparatus as taught.

c) **In Regarding to Claim 11:** the claimed subject matters of this claim are the same as that of claim 1. Therefore, the rejection to claim 1 would also apply to this claim in a communication control apparatus as taught.

d) **In Regarding to Claim 16:** **Ghodrat disclosed** a communication system for effecting a communication between a first device and a second device connected to a predetermined network (*see Fig.2*), wherein

said first device includes a virtual output plug for isochronous communication and a virtual input plug for isochronous communication (*see col.6 lines 33-50: virtual connection; and see Fig.2: device 25 (first device); in which, the output of Link layer Transmitter 145 is considered as a virtual output plug since the Mux 142 multiplexes isochronous data and ATM data into packets and sends such packets to the 145, whereby the packets will be transmitted to nodes 160 in logical links (hence virtual output plugs).*)  
*In the reverse way, data transmitted from nodes 160 to the node 120 via the device 25 through the Link Layer Receiver 165 (hence the virtual input plug) via the IEEE 1394 (hence isochronous communication).*

said second device includes a virtual output plug for isochronous communication and a virtual input plug for isochronous communication (*see the bidirectional link shown on the IEEE 1394 that is connected from/to the device 25 to/from nodes 160*),

a first connection is established between the virtual output plug of said first device and the virtual input plug of said second device by using a first isochronous channel (*see the connection from the 145 to the nodes 160*),

a second connection is established between the virtual output plug of said second device and the virtual input plug of said first device by using a second isochronous channel and a bidirectional isochronous communication is effected between said first device and said second device by using said first connection and said second connection (*see the connection from the nodes 160 to the 165; and see col.7 lines 26-35*).

d) **In Regarding to Claim 17:** the claimed subject matters of this claim are the same as that of claim 16. Therefore, the rejection to claim 16 would also apply to this claim in a communication system as taught.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ghodrat et al.** (US Patent No. 6,717,947).

**Ghodrat disclosed** a communication method for effecting among devices as recited in Claim 1. This method can be applied to reject this claim for the same reasons as claim 18 because it is well known in the art that method steps can be programmed to automate a process. The resulting program is considered as a firmware that the apparatus uses to perform the method steps.

At the time of the invention, **it would have been obvious** to include in **Ghodrat** this well-known art, and the **motivation being** to make **Ghodrat's** devices operate automatically.

***Examiner Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATT  
8/11/2004

A handwritten signature in black ink, appearing to read "Brian Sauer". Below the main name, the initials "ph" are written.